

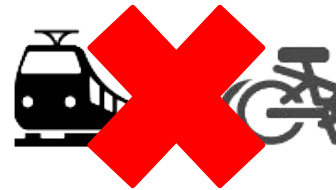
Sarah lives in Flanders, BE

Has a 25 km commute

Always wants to be **on time**

Insists on a **max 1 hour** commute (door-door)

Mobility options?





Can speed pedelecs really fulfil  
the mobility needs of daily  
commuters?



## 365SNEL-project

Goal:

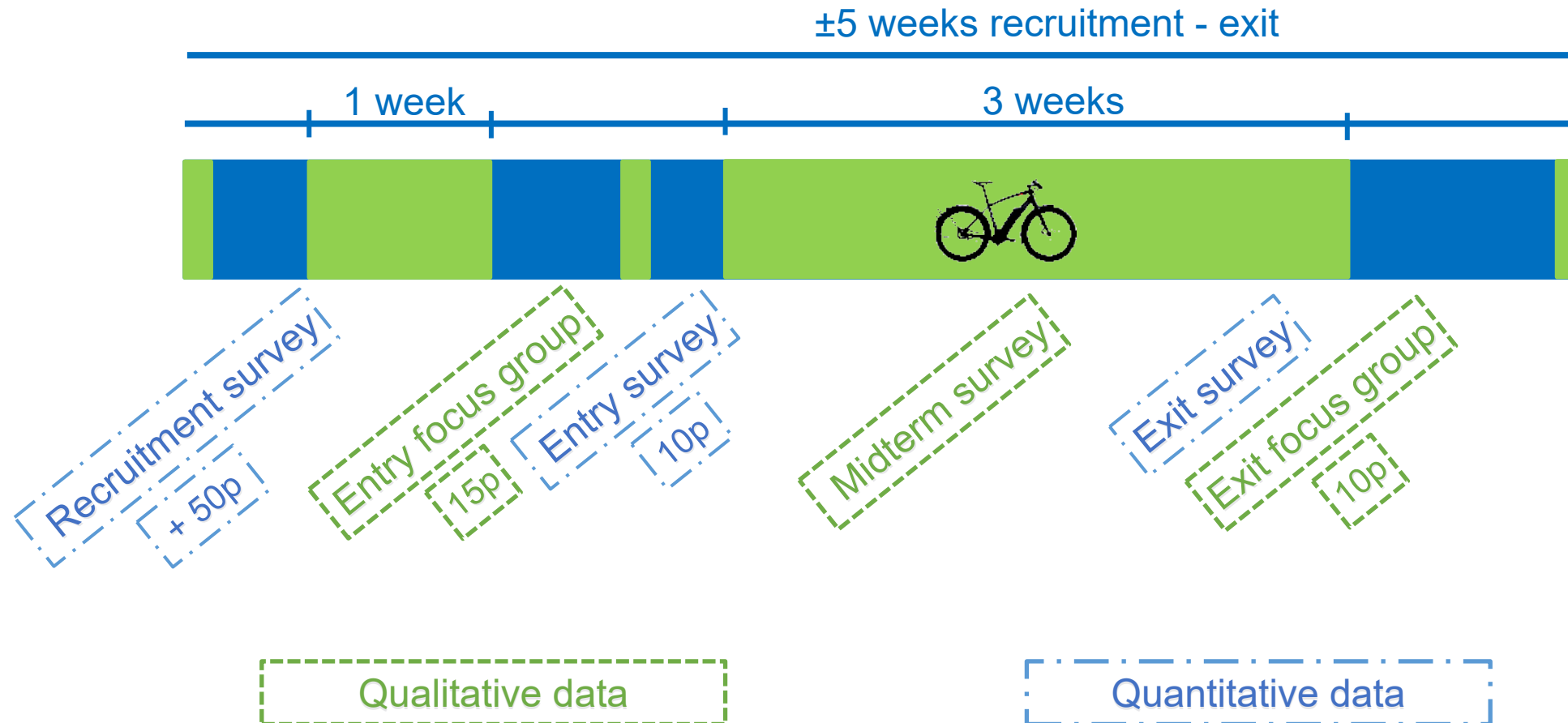


**Can the speed pedelec be a 365-days commuting vehicle?**

- Project duration: Mar 2018 – Mar 2020
- Ten companies in Flanders (8/10 done)
- 3 weeks of use,  $\pm 10$  test persons
- Information captured: surveys + GPS logging



# Research design



Multiple surveys  
& contact  
moments: to  
capture  
changes in  
perception &  
acceptance

# Interested parties



50

50 interested  
organisations

8 selected organisations



457 interested  
individuals



Average age



21.5 km



# Selection criteria

15 km < Commuting distance < 35 km

Age & gender representative to the sample

No prior experience with speed pedelecs



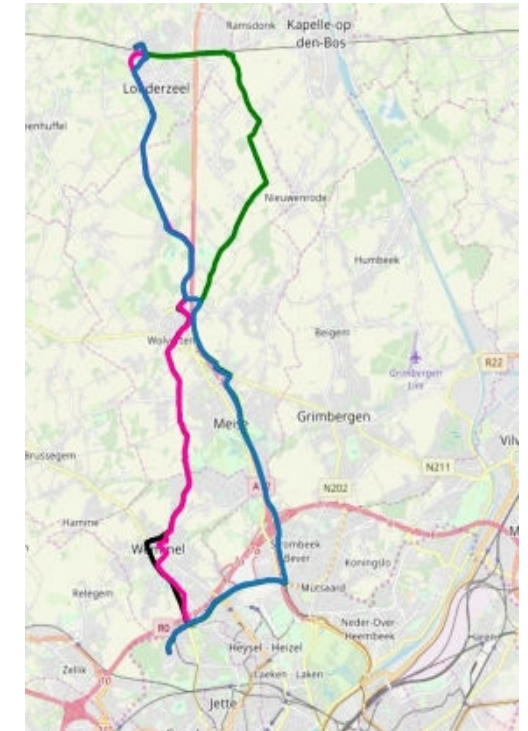
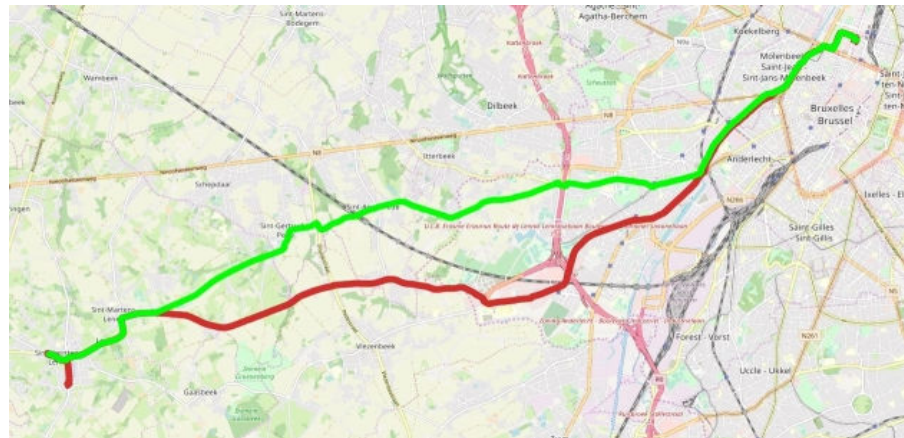
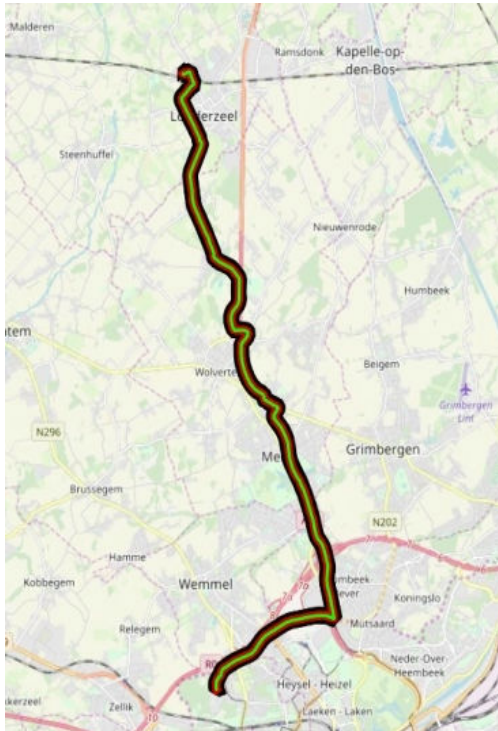


# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



## Preliminary results

## Types of riders



“ *conservative* ”





# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



## Themes & feelings

### Before

Ease of use

Health effects

Safety

Speed Time management

Traffic regulations

Ease of use

Speed Safety

Price

Health effects

Time management

Technical aspects

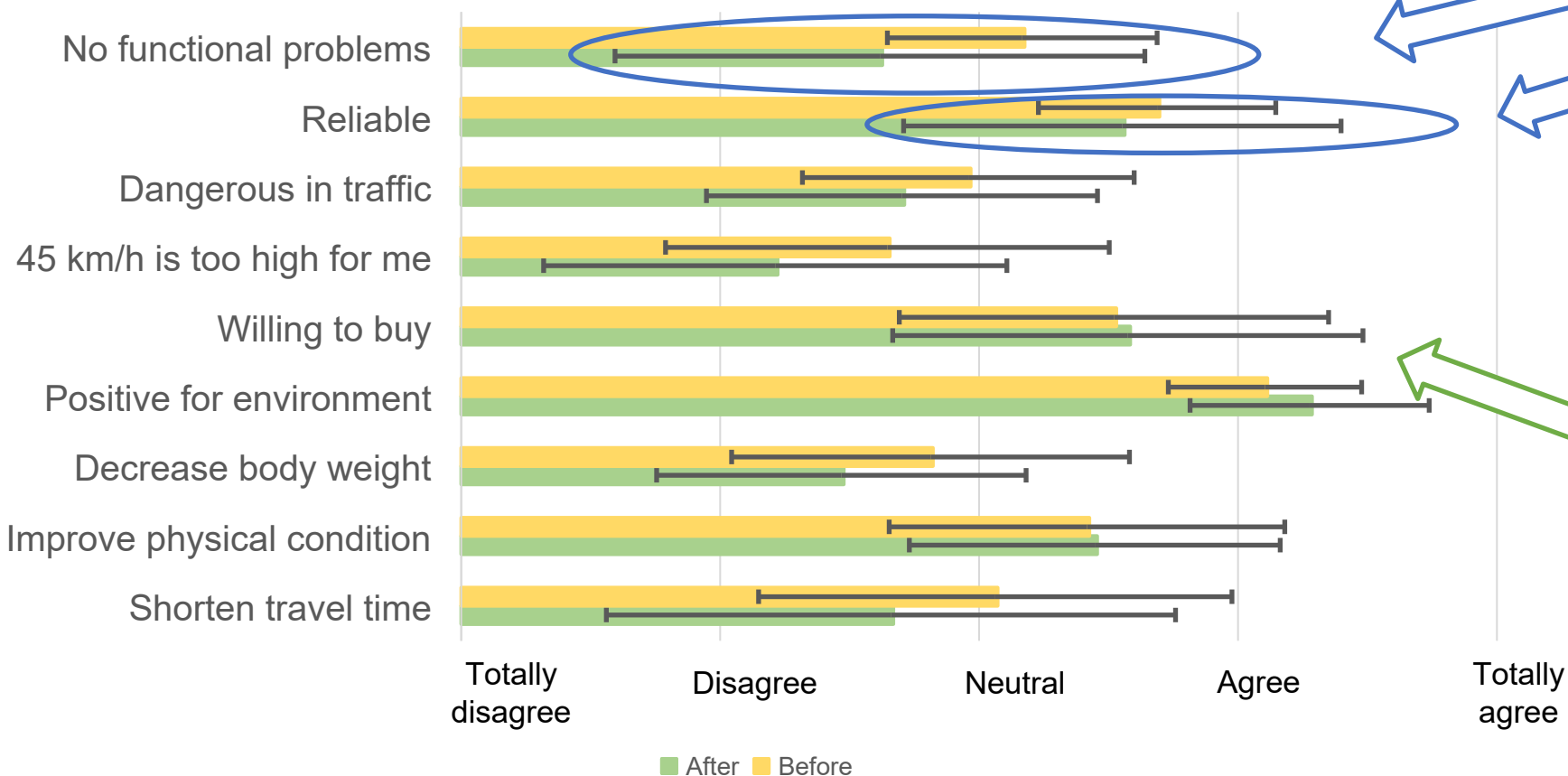
# Quantitative surveys

Comparison of means before and after the test

Standard deviation increases  
**Opinions diverge on reliability!**

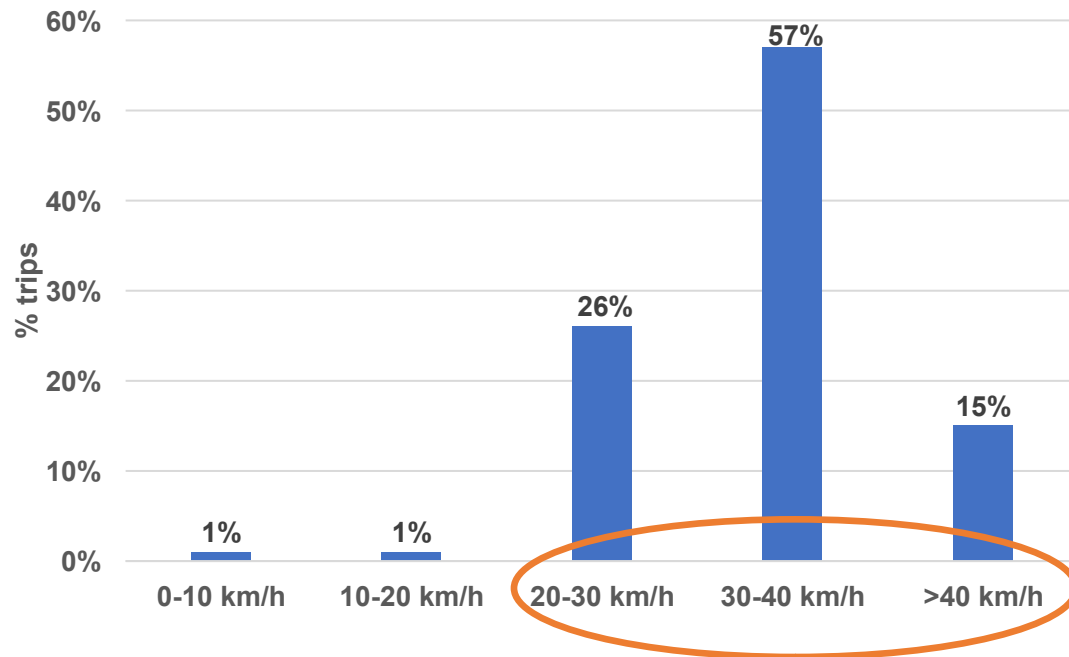
**Quality?**

**Still willing to buy!**

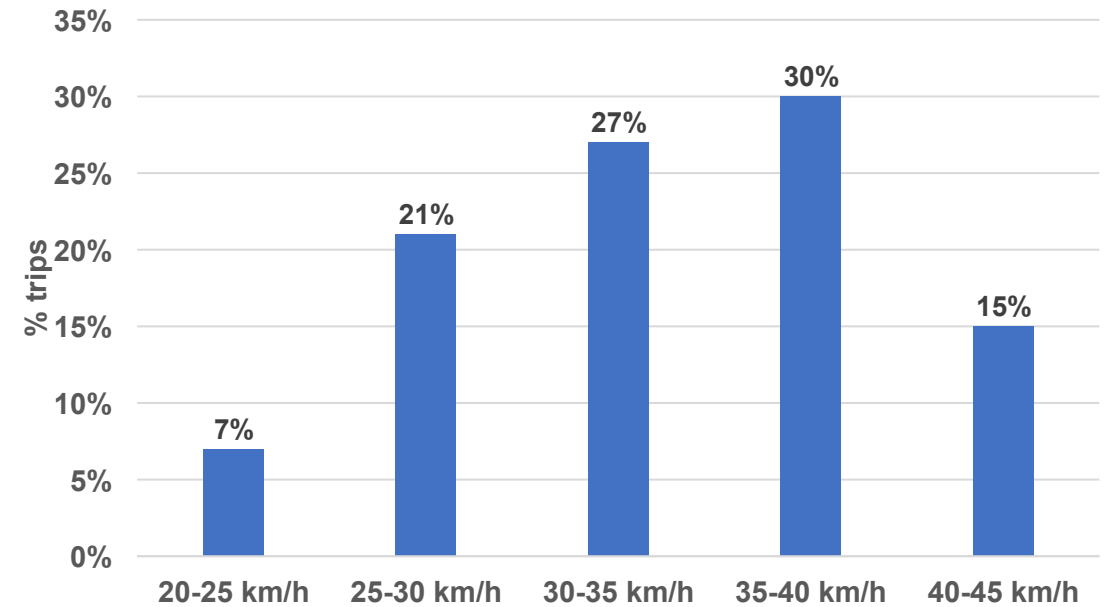


# Cruising speeds

Cruising speed



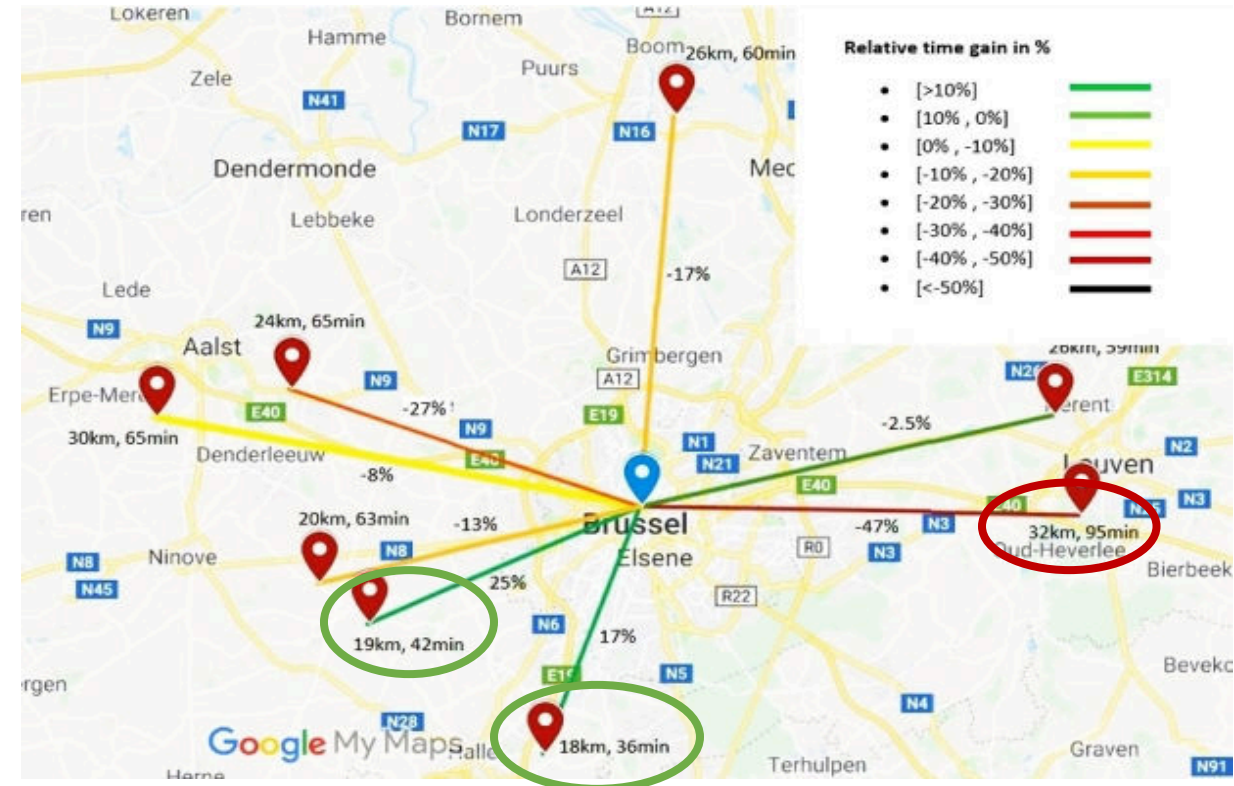
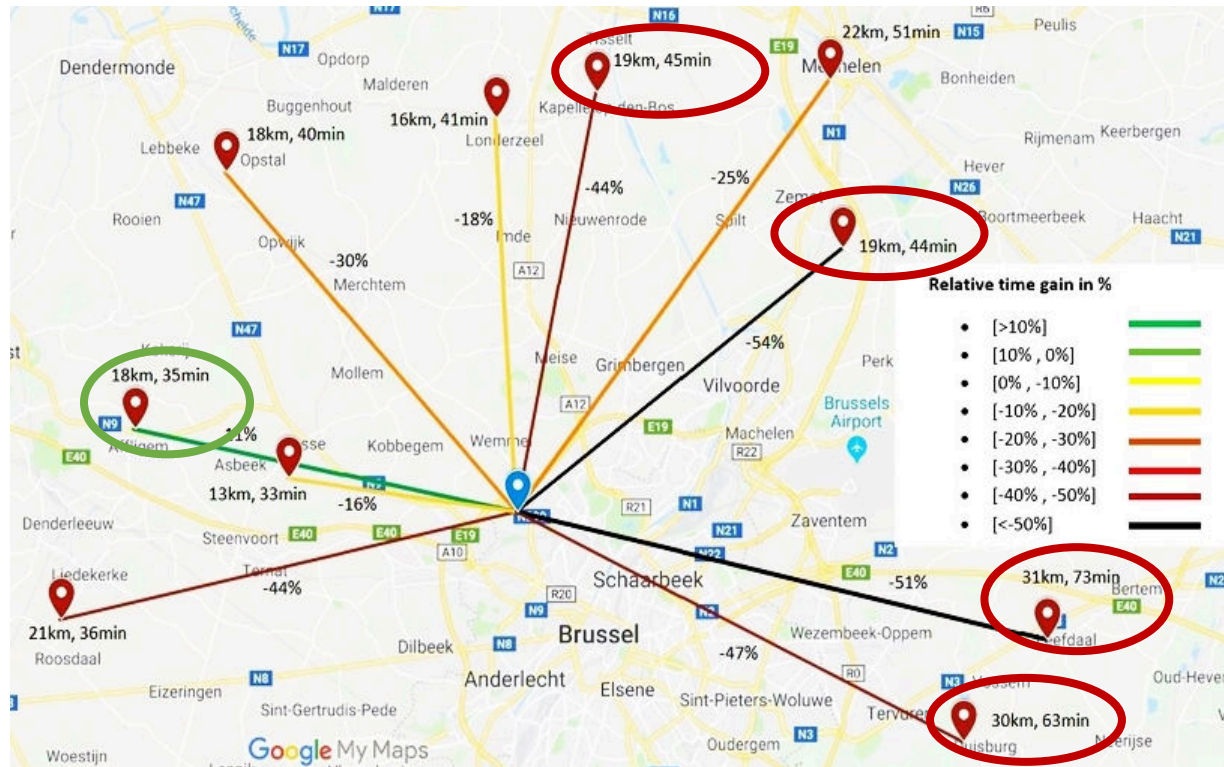
Cruising speeds above 20 km/h





## Time gain vs time loss

- Time gain is relative: where you live & work matters





## Preliminary Conclusions

- Different **types** of users
- **Price** is important
- Questions to be asked about **reliability**
- More than 50% of the time, a cruising **speed** between 30 & 40 km/h
- **Time gain** depends on where you live & work



# Preliminary Conclusions

**Can speed pedelecs really fulfil the mobility needs of daily commuters?**

**YES!**

But: it depends where you live **and** work (infrastructure, weather, day, departure time)

Further analysis needed:

- Quality of the speed pedelec
- Consumer acceptance
- Spatial temporal analysis



# INTERNATIONAL ELECTRIC VEHICLE SYMPOSIUM & EXHIBITION



Thank you

Nikolaas Van den Steen – [nikolaas.vandensteen@kuleuven.be](mailto:nikolaas.vandensteen@kuleuven.be)

## More context

- Belgium: problems regarding air quality & road congestion
- Improvement possible: reducing car use (EU Commission )  
=> *difficult: cars and congestion growing to date [1]*
- Switch to LEVs: 5 times more energy efficient [2]
- In Flanders: speed pedelecs could be a solution  
→ registration data (16 000 speed pedelecs vs 6000 BEV registered in 3 years)
- => 365SNEL project
- [1]: Touring “Filebarometer 2018” – <https://www.touring.be/nl/pers/touring-mobilis-belgen-staan-meer-en-meer-de-file-tijdens-daluren>
- [2]: Stevens et al. “Het potentieel van licht elektrische voertuigen in Vlaanderen” - <https://iiw.kuleuven.be/apps/lev/eindrapport.pdf>

Total hours of Belgian congestion (2012-2018)

